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Stable Ischemic Heart Disease

CABG VERSUS PCI: THE EFFECT OF MULTIPLE ARTERIAL GRAFTING ON SURVIVAL

Moderated Poster Contributions
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Background: Previous comparisons of coronary artery bypass grafting (CABG) and percutaneous intervention (PCI) using stents have included very few CABG patients receiving multiple arterial bypass grafts (MABG) as opposed to a single left internal thoracic artery (SITA). We thus sought to determine if MABG, using the LITA and the radial artery (RA), would have a significant survival benefit over traditional SITA, when each are compared to PCI using drug eluting stents (DES).

Methods: We compared 2,716 isolated, primary CABG patients (1,065 MABG and 1,651 SITA) with 1,682 PCI-DES patients (treated from 1/2003 to 1/2009) for de novo multivessel coronary artery disease (MVD).

Results: After risk adjustment, the 8 year all cause mortality rate was 9.4% for MABG, 14.8% for SITA and 19.6% for PCI (Figure-left). Overall, both MABG (HR=0.45, p<0.001) and SITA (HR=0.73, p=0.015) significantly improved survival compared to PCI. In addition, MABG survival was better than SITA survival (HR=0.75, p<0.001). The Figure-right shows that MABG was superior to DES irrespective of diabetes, age or LV function. Moreover, SITA was not significantly superior to DES in non diabetic, young and decreased LV function patient groups.

Conclusions: Both MABG and SITA significantly improve survival in patients with MVD compared to DES. Compared to DES, MABG has a greater survival benefit than SITA and MABG is preferred over SITA in patients with age < 60 years, no diabetes and with EF < 40%. MABG is the optimal treatment of patients with MVD.